

FTP bag results on 2009-2015 US diesel vehicles - April 26, 2016 email from Byron

## Bunker of EPA to John German of ICCT

MODE YEAR	TEST L		MFR CODE	VID	R	CONFIG NUMBE	BAG READIN	BAG NOX MASS FINAL
	DATE	TESTKEY	ALPHA				G	
2009	#####	#####	MBX	X164DE30-Z9000	0	1		0.113339916
2009	#####	#####	MBX	X164DE30-Z9000	0	2		0
2009	#####	#####	MBX	X164DE30-Z9000	0	3		0.000578591
2009	#####	#####	VWX	VW351 780169/09	0	1		0.025243621
2009	#####	#####	VWX	VW351 780169/09	0	2		0.001336103
2009	#####	#####	VWX	VW351 780169/09	0	3		0.007280182
2009	#####	#####	CEX	L6D184311	2	1		0.3891157
2009	#####	#####	CEX	L6D184311	2	2		0.036935185
2009	#####	#####	CEX	L6D184311	2	3		0.158350283
2009	#####	#####	BMX	LJ95006	0	1		0.194117345
2009	#####	#####	BMX	LJ95006	0	2		0.016047246
2009	#####	#####	BMX	LJ95006	0	3		0.042989586
2009	#####	#####	BMX	LJ95006	0	1		0.118792592
2009	#####	#####	BMX	LJ95006	0	2		0.008520133
2009	#####	#####	BMX	LJ95006	0	3		0.007998901
2009	#####	#####	BMX	LJ95006	0	1		0.123706755
2009	#####	#####	BMX	LJ95006	0	2		0.01508491
2009	#####	#####	BMX	LJ95006	0	3		0.011187772
2009	#####	#####	BMX	A265015	0	1		0.115487269
2009	#####	#####	BMX	A265015	0	2		0.041721847
2009	#####	#####	BMX	A265015	0	3		0.023250926
2009	#####	#####	BMX	A265015	0	1		0.084874926
2009	#####	#####	BMX	A265015	0	2		0.024564061
2009	#####	#####	BMX	A265015	0	3		0.015080787
2009	#####	#####	ADX	EDV 93LD-TAQ	0	1		0.124138171
2009	#####	#####	ADX	EDV 93LD-TAQ	0	2		0.006815647
2009	#####	#####	ADX	EDV 93LD-TAQ	0	3		0.015489766
2010	#####	#####	CEX	K0D288343	0	1		0.491532168
2010	#####	#####	CEX	K0D288343	0	2		0.105129094
2010	#####	#####	CEX	K0D288343	0	3		0.298602826
2010	#####	#####	CEX	K0D288343	0	1		0.421482593
2010	#####	#####	CEX	K0D288343	0	2		0.067752428
2010	#####	#####	CEX	K0D288343	0	3		0.30790634
2010	#####	#####	CEX	K0D288343	2	1		0.561966844
2010	#####	#####	CEX	K0D288343	2	2		0.131904771
2010	#####	#####	CEX	K0D288343	2	3		0.407445893
2010	#####	#####	CEX	K0D288343	4	1		0.369362872
2010	#####	#####	CEX	K0D288343	4	2		0.046951041
2010	#####	#####	CEX	K0D288343	4	3		0.2622114
2010	#####	#####	MBX	L906DE30-Z0051	0	1		0.417313971
2010	#####	#####	MBX	L906DE30-Z0051	0	2		0.097919046
2010	#####	#####	MBX	L906DE30-Z0051	0	3		0.043107066
2010	#####	#####	MBX	L906DE30-Z0051	0	1		0.175057277
2010	#####	#####	MBX	L906DE30-Z0051	0	2		0.004760653
2010	#####	#####	MBX	L906DE30-Z0051	0	3		0.018893116
2010	#####	#####	VWX	S108RXX-0047	0	1		0.139971403

**Bag 1 to Bag3**

Nox Ratio	Bag 1 Nox	Bag 2 Nox	Bag 3 Nox	Bag 1 / Bag 3
195.89	0.11333992	0	0.00057859	195.8895247
--				
3.47	0.02524362	0.0013361	0.00728018	3.467443671
--				
2.46	0.3891157	0.03693519	0.15835028	2.457309786
--				
4.52	0.19411735	0.01604725	0.04298959	4.51545044
--				
14.85	0.11879259	0.00852013	0.0079989	14.85111417
--				
11.06	0.12370676	0.01508491	0.01118777	11.0573182
--				
4.97	0.11548727	0.04172185	0.02325093	4.96699654
--				
5.63	0.08487493	0.02456406	0.01508079	5.628017026
--				
8.01	0.12413817	0.00681565	0.01548977	8.014205702
--				
1.65	0.49153217	0.10512909	0.29860283	1.646106886
--				
1.37	0.42148259	0.06775243	0.30790634	1.368866237
--				
1.38	0.56196684	0.13190477	0.40744589	1.379242873
--				
1.41	0.36936287	0.04695104	0.2622114	1.40864536
--				
9.68	0.41731397	0.09791905	0.04310707	9.6808716
--				
9.27	0.17505728	0.00476065	0.01889312	9.265664647
--				
21.99	0.1399714	0.00130898	0.0063648	21.99150216



2010	#####	#####	VWX	S108RXX-0047	0	2	0.001308976
2010	#####	#####	VWX	S108RXX-0034	0	3	0.006364795
2010	#####	#####	VWX	S108RXX-0034	0	1	0.061132235
2010	#####	#####	VWX	S108RXX-0034	0	2	0.000707166
2010	#####	#####	VWX	S108RXX-0034	0	3	0.008345796
2010	#####	#####	VWX	S108RXX-0034	0	1	0.037124389
2010	#####	#####	VWX	S108RXX-0034	0	2	0.001713529
2010	#####	#####	VWX	S108RXX-0034	0	3	0.011637525
2010	#####	#####	VWX	S108RXX-0014	0	1	0.022613086
2010	#####	#####	VWX	S108RXX-0014	0	2	0.000268571
2010	#####	#####	VWX	S108RXX-0014	0	3	0.001392066
2011	#####	#####	FMX	BFA1-6.7-J-005	0	1	0.860922179
2011	#####	#####	FMX	BFA1-6.7-J-005	0	2	0.124705792
2011	#####	#####	FMX	BFA1-6.7-J-005	0	3	0.383818762
2011	#####	#####	ADX	EDV B3UG-TAQ	0	1	0.161281615
2011	#####	#####	ADX	EDV B3UG-TAQ	0	2	0.000944439
2011	#####	#####	ADX	EDV B3UG-TAQ	0	3	0.004081729
2011	#####	#####	SZX	JB7400010	0	1	0.987212913
2011	#####	#####	SZX	JB7400010	0	2	0.055565267
2011	#####	#####	SZX	JB7400010	0	3	0.312784136
2011	#####	#####		MA1TZ4BJL92A14029	0	1	0.099038228
2011	#####	#####		MA1TZ4BJL92A14029	0	2	0.001826802
2011	#####	#####		MA1TZ4BJL92A14029	0	3	0.014057852
2012	#####	#####	VWX	411 10208 /12	0	1	0.094048775
2012	#####	#####	VWX	411 10208 /12	0	2	0.001800011
2012	#####	#####	VWX	411 10208 /12	0	3	0.006771807
2012	#####	#####	VWX	411 10208 /12	0	1	0.096987065
2012	#####	#####	VWX	411 10208 /12	0	2	0.001011542
2012	#####	#####	VWX	411 10208 /12	0	3	0.00541516
2012	#####	#####	ADX	B3UG-TAQ	0	1	0.166931635
2012	#####	#####	ADX	B3UG-TAQ	0	2	0.00115299
2012	#####	#####	ADX	B3UG-TAQ	0	3	0.004860838
2012	#####	#####	MBX	V251DE30TC-Z9016	3	1	0.09095912
2012	#####	#####	MBX	V251DE30TC-Z9016	3	2	0.000614378
2012	#####	#####	MBX	V251DE30TC-Z9016	3	3	0.001345393
2013	#####	#####	GMX	66C2C96075	0	1	0.353711534
2013	#####	#####	GMX	66C2C96075	0	2	0.007571454
2013	#####	#####	GMX	66C2C96075	0	3	0.042501185
2013	#####	#####	VWX	VW324 10220/13	0	1	0.53013818
2013	#####	#####	VWX	VW324 10220/13	0	2	0.065844692
2013	#####	#####	VWX	VW324 10220/13	0	3	0.006930162
2013	#####	#####	FMX	DFA1-6.7-J-316	0	1	0.352221152
2013	#####	#####	FMX	DFA1-6.7-J-316	0	2	0.038071042
2013	#####	#####	FMX	DFA1-6.7-J-316	0	3	0.249837783
2013	#####	#####	CEX	K3DJ79113	0	1	0.564967411
2013	#####	#####	CEX	K3DJ79113	0	2	0.016181836
2013	#####	#####	CEX	K3DJ79113	0	3	0.02027682
2013	#####	#####	ADX	D3UG-DAQ	1	1	0.148273885
2013	#####	#####	ADX	D3UG-DAQ	1	2	0.012692391
2013	#####	#####	ADX	D3UG-DAQ	1	3	0.009642715
2013	#####	#####	ADX	D3UG-DAQ	1	1	0.123374143

--  
--  
7.32 0.06113224 0.00070717 0.0083458 7.324913645  
--  
--  
3.19 0.03712439 0.00171353 0.01163753 3.190058797  
--  
--  
16.24 0.02261309 0.00026857 0.00139207 16.24426284  
--  
--  
2.24 0.86092218 0.12470579 0.38381876 2.243043499  
--  
--  
39.51 0.16128162 0.00094444 0.00408173 39.51306297  
--  
--  
3.16 0.98721291 0.05556527 0.31278414 3.156211583  
--  
--  
7.05 0.09903823 0.0018268 0.01405785 7.045046996  
--  
--  
13.89 0.09404878 0.00180001 0.00677181 13.88828344  
--  
--  
17.91 0.09698707 0.00101154 0.00541516 17.91028612  
--  
--  
34.34 0.16693164 0.00115299 0.00486084 34.3421515  
--  
--  
67.61 0.09095912 0.00061438 0.00134539 67.60784395  
--  
--  
8.32 0.35371153 0.00757145 0.04250119 8.322392282  
--  
--  
76.50 0.53013818 0.06584469 0.00693016 76.49722763  
--  
--  
1.41 0.35222115 0.03807104 0.24983778 1.409799382  
--  
--  
27.86 0.56496741 0.01618184 0.02027682 27.86272261  
--  
--  
15.38 0.14827389 0.01269239 0.00964272 15.3767777  
--  
--  
10.60 0.12337414 0.012942 0.01164188 10.59743883



2013	#####	#####	ADX	D3UG-DAQ	1	2	0.012942
2013	#####	#####	ADX	D3UG-DAQ	1	3	0.011641883
2013	#####	#####	VWX	VW 361 40129	0	1	0.080113215
2013	#####	#####	VWX	VW 361 40129	0	2	0.001347337
2013	#####	#####	VWX	VW 361 40129	0	3	0.017137896
2013	#####	#####	MBX	X204DE22TC-Z3016	0	1	0.128757763
2013	#####	#####	MBX	X204DE22TC-Z3016	0	2	0.010683723
2013	#####	#####	MBX	X204DE22TC-Z3016	0	3	0.007302727
2013	#####	#####	CEX	V3DJ75193	1	1	0.603184372
2013	#####	#####	CEX	V3DJ75193	1	2	0.037743599
2013	#####	#####	CEX	V3DJ75193	1	3	0.08802311
2013	#####	#####	CEX	V3DJ75193	3	1	0.661831426
2013	#####	#####	CEX	V3DJ75193	3	2	0.045547592
2013	#####	#####	CEX	V3DJ75193	3	3	0.065581215
2013	#####	#####	CEX	V3D281768	1	1	0.608670313
2013	#####	#####	CEX	V3D281768	1	2	0.052878524
2013	#####	#####	CEX	V3D281768	1	3	0.073689761
2013	#####	#####	0	V148RXX-0058	0	1	0.079441069
2013	#####	#####	0	V148RXX-0058	0	2	0.001303171
2013	#####	#####	0	V148RXX-0058	0	3	0.020826779
2013	#####	#####	0	V148RXX-0090	0	1	0.567468434
2013	#####	#####	0	V148RXX-0090	0	2	0.015293058
2013	#####	#####	0	V148RXX-0090	0	3	0.008018514
2013	#####	#####	VWX	V149RXX-0097	0	1	0.079844598
2013	#####	#####	VWX	V149RXX-0097	0	2	0.000601029
2013	#####	#####	VWX	V149RXX-0097	0	3	0.031733638
2013	#####	#####	VWX	V148RXX-0232	0	1	0.840087766
2013	#####	#####	VWX	V148RXX-0232	0	2	0.021022804
2013	#####	#####	VWX	V148RXX-0232	0	3	0.058984195
2013	#####	#####	VWX	V148RXX-0232	0	1	0.089357922
2013	#####	#####	VWX	V148RXX-0232	0	2	0.000841603
2013	#####	#####	VWX	V148RXX-0232	0	3	0.027424532
2014	#####	#####	GMX	201EPV4201	0	1	0.109606219
2014	#####	#####	GMX	201EPV4201	0	2	0.005236434
2014	#####	#####	GMX	201EPV4201	0	3	0.014788184
2014	#####	#####	BMX	F099010	14	1	0.065164328
2014	#####	#####	BMX	F099010	14	2	0.024861858
2014	#####	#####	BMX	F099010	14	3	0.005400408
2014	#####	#####	BMX	F099010	7	1	0.039303428
2014	#####	#####	BMX	F099010	7	2	0.005636426
2014	#####	#####	BMX	F099010	7	3	0.004691503
2014	#####	#####	GMX	201DPN4438	0	1	0.127517356
2014	#####	#####	GMX	201DPN4438	0	2	0.010546587
2014	#####	#####	GMX	201DPN4438	0	3	0.016453316
2014	#####	#####	CEX	K3DJ79113	1	1	0.539778221
2014	#####	#####	CEX	K3DJ79113	1	2	0.02801223
2014	#####	#####	CEX	K3DJ79113	1	3	0.047688192
2014	#####	#####	BMX	D001500	2	1	0.119051612
2014	#####	#####	BMX	D001500	2	2	0.001733669
2014	#####	#####	BMX	D001500	2	3	0.001055219
2014	#####	#####	MBX	L906DE22TC-Z4013-1	0	1	0.253943522

--  
--  
4.67 0.08011322 0.00134734 0.0171379 4.674623711  
--  
--  
17.63 0.12875776 0.01068372 0.00730273 17.63146329  
--  
--  
6.85 0.60318437 0.0377436 0.08802311 6.852568286  
--  
--  
10.09 0.66183143 0.04554759 0.06558122 10.09178354  
--  
--  
8.26 0.60867031 0.05287852 0.07368976 8.259903476  
--  
--  
3.81 0.07944107 0.00130317 0.02082678 3.814371344  
--  
--  
70.77 0.56746843 0.01529306 0.00801851 70.7697753  
--  
--  
2.52 0.0798446 0.00060103 0.03173364 2.516087125  
--  
--  
14.24 0.84008777 0.0210228 0.0589842 14.24259102  
--  
--  
3.26 0.08935792 0.0008416 0.02742453 3.258320762  
--  
--  
7.41 0.10960622 0.00523643 0.01478818 7.411742983  
--  
--  
12.07 0.06516433 0.02486186 0.00540041 12.06655645  
--  
--  
8.38 0.03930343 0.00563643 0.0046915 8.377577079  
--  
--  
7.75 0.12751736 0.01054659 0.01645332 7.750252654  
--  
--  
11.32 0.53977822 0.02801223 0.04768819 11.31890723  
--  
--  
112.82 0.11905161 0.00173367 0.00105522 112.82171  
--  
--  
2.19 0.25394352 0.05295915 0.11571207 2.194615594



2014	#####	#####	MBX	L906DE22TC-Z4013-1	0	2	0.052959147
2014	#####	#####	MBX	L906DE22TC-Z4013-1	0	3	0.115712074
2014	#####	#####	BMX	0C06511	0	1	0.088614595
2014	#####	#####	BMX	0C06511	0	2	0.001384466
2014	#####	#####	BMX	0C06511	0	3	0.001371403
2014	#####	#####	CRX	L4DS13055	0	1	0.133080321
2014	#####	#####	CRX	L4DS13055	0	2	0.017563793
2014	#####	#####	CRX	L4DS13055	0	3	0.007932379
2014	#####	#####	CRX	R4DS68933	0	1	0.141370398
2014	#####	#####	CRX	R4DS68933	0	2	0.004554877
2014	#####	#####	CRX	R4DS68933	0	3	0.00392896
2014	#####	#####	0	V4DJ75663	0	1	0.627618194
2014	#####	#####	0	V4DJ75663	0	2	0.009281304
2014	#####	#####	0	V4DJ75663	0	3	0.148842788
2014	#####	#####	0	2014P10670	0	1	0.113246151
2014	#####	#####	0	2014P10670	0	2	0.012070904
2014	#####	#####	0	2014P10670	0	3	0.016663693
2014	#####	#####	0	V4DJ28661	0	1	0.621530649
2014	#####	#####	0	V4DJ28661	0	2	0.139407075
2014	#####	#####	0	V4DJ28661	0	3	0.130803097
2014	#####	#####	0	V4D234858	1	1	0.558671138
2014	#####	#####	0	V4D234858	1	2	0.159941216
2014	#####	#####	0	V4D234858	1	3	0.215883105
2014	#####	#####	0	V4D234858	0	1	0.700168943
2014	#####	#####	0	V4D234858	0	2	0.106851364
2014	#####	#####	0	V4D234858	0	3	0.108995236
2014	#####	#####	0	312T672	1	1	0.378034252
2014	#####	#####	0	312T672	1	2	0.079763877
2014	#####	#####	0	312T672	1	3	0.266132381
2014	#####	#####	0	312T672	1	1	0.352100096
2014	#####	#####	0	312T672	1	2	0.054836447
2014	#####	#####	0	312T672	1	3	0.280761206
2014	#####	#####	CRX	V152RXX-0091	0	1	0.270349408
2014	#####	#####	CRX	V152RXX-0091	0	2	0.101291861
2014	#####	#####	CRX	V152RXX-0091	0	3	0.213937284
2014	#####	#####	CRX	V152RXX-0147	0	1	0.340617618
2014	#####	#####	CRX	V152RXX-0147	0	2	0.140964564
2014	#####	#####	CRX	V152RXX-0147	0	3	0.279199234
2014	#####	#####	VWX	V300RXX-0007	0	1	0.141681895
2014	#####	#####	VWX	V300RXX-0007	0	2	0.009070821
2014	#####	#####	VWX	V300RXX-0007	0	3	0.022495619
2014	#####	#####	CRX	V152RXX-0098	0	1	0.245741153
2014	#####	#####	CRX	V152RXX-0098	0	2	0.043009246
2014	#####	#####	CRX	V152RXX-0098	0	3	0.162548049
2014	#####	#####	CRX	V152RXX-0176	0	1	0.180679934
2014	#####	#####	CRX	V152RXX-0176	0	2	0.034356681
2014	#####	#####	CRX	V152RXX-0176	0	3	0.133507168
2014	#####	#####	CRX	V152RXX-0335	0	1	0.167291835
2014	#####	#####	CRX	V152RXX-0335	0	2	0.348334453
2014	#####	#####	CRX	V152RXX-0335	0	3	0.08165004
2014	#####	#####	GMX	W100RXX-0106	0	1	0.149918867

--  
--  
64.62 0.0886146 0.00138447 0.0013714 64.61601367  
--  
--  
16.78 0.13308032 0.01756379 0.00793238 16.77684853  
--  
--  
35.98 0.1413704 0.00455488 0.00392896 35.98163331  
--  
--  
4.22 0.62761819 0.0092813 0.14884279 4.216651693  
--  
--  
6.80 0.11324615 0.0120709 0.01666369 6.795981599  
--  
--  
4.75 0.62153065 0.13940708 0.1308031 4.751650865  
--  
--  
2.59 0.55867114 0.15994122 0.21588311 2.587840943  
--  
--  
6.42 0.70016894 0.10685136 0.10899524 6.423849048  
--  
--  
1.42 0.37803425 0.07976388 0.26613238 1.420474467  
--  
--  
1.25 0.3521001 0.05483645 0.28076121 1.25409098  
--  
--  
1.26 0.27034941 0.10129186 0.21393728 1.263685333  
--  
--  
1.22 0.34061762 0.14096456 0.27919923 1.219980489  
--  
--  
6.30 0.1416819 0.00907082 0.02249562 6.298199441  
--  
--  
1.51 0.24574115 0.04300925 0.16254805 1.511806229  
--  
--  
1.35 0.18067993 0.03435668 0.13350717 1.353335081  
--  
--  
2.05 0.16729184 0.34833445 0.08165004 2.048888586  
--  
--  
4.48 0.14991887 0.0213081 0.03346548 4.479805731



2014	#####	#####	GMX	W100RXX-0106	0	2	0.021308098
2014	#####	#####	GMX	W100RXX-0106	0	3	0.033465484
2014	#####	#####	GMX	W100RXX-0036	0	1	0.138584798
2014	#####	#####	GMX	W100RXX-0036	0	2	0.007058593
2014	#####	#####	GMX	W100RXX-0036	0	3	0.028924933
2014	#####	#####	GMX	W100RXX-0109	0	1	0.188631209
2014	#####	#####	GMX	W100RXX-0109	0	2	0.005078985
2014	#####	#####	GMX	W100RXX-0109	0	3	0.067601784
2015	#####	#####	FMX	FFA1-6.7-J-600	0	1	0.380811285
2015	#####	#####	FMX	FFA1-6.7-J-600	0	2	0.014453546
2015	#####	#####	FMX	FFA1-6.7-J-600	0	3	0.058581508
2015	#####	#####	FMX	ETH1-3.2-464	0	1	0.369049257
2015	#####	#####	FMX	ETH1-3.2-464	0	2	0.012697929
2015	#####	#####	FMX	ETH1-3.2-464	0	3	0.184323831
2015	#####	#####	FMX	EKA00026	0	1	0.465417847
2015	#####	#####	FMX	EKA00026	0	2	0.009746683
2015	#####	#####	FMX	EKA00026	0	3	0.290322609
2015	#####	#####	CEX	6292	0	1	0.752595742
2015	#####	#####	CEX	6292	0	2	0.014245603
2015	#####	#####	CEX	6292	0	3	0.02487211
2015	#####	#####		VW361 50070 /15	0	1	0.092885531
2015	#####	#####		VW361 50070 /15	0	2	0.001668945
2015	#####	#####		VW361 50070 /15	0	3	0.013708174
2015	#####	#####		VW370 50379 /15	2	1	0.099032745
2015	#####	#####		VW370 50379 /15	2	2	0.002170665
2015	#####	#####		VW370 50379 /15	2	3	0.01835692
2015	#####	#####		VW370 40145 /15	1	1	0.076210999
2015	#####	#####		VW370 40145 /15	1	2	0.006874581
2015	#####	#####		VW370 40145 /15	1	3	0.024794132
2015	#####	#####	MBX	W166DE22TC-Z4011	0	1	0.131860551
2015	#####	#####	MBX	W166DE22TC-Z4011	0	2	0.003793901
2015	#####	#####	MBX	W166DE22TC-Z4011	0	3	0.075826943
2015	#####	#####	0	0C06535	0	1	0.041555588
2015	#####	#####	0	0C06535	0	2	0.000567516
2015	#####	#####	0	0C06535	0	3	0.000543632
2015	#####	#####	0	JF7400002	0	1	0.757889034
2015	#####	#####	0	JF7400002	0	2	0.023702217
2015	#####	#####	0	JF7400002	0	3	0.258734986
2015	#####	#####	0	L906DE30TC-Z5051-1	0	1	0.420033671
2015	#####	#####	0	L906DE30TC-Z5051-1	0	2	0.067650886
2015	#####	#####	0	L906DE30TC-Z5051-1	0	3	0.051498574
2015	#####	#####	0	L4VF18455	1	1	0.437764532
2015	#####	#####	0	L4VF18455	1	2	0.014948018
2015	#####	#####	0	L4VF18455	1	3	0.092691108
2015	#####	#####	MBX	W300RXX-0001	0	1	0.14132945
2015	#####	#####	MBX	W300RXX-0001	0	2	0.040486333
2015	#####	#####	MBX	W300RXX-0001	0	3	0.024318577
2015	#####	#####	MBX	W300RXX-0001	0	1	0.142753748
2015	#####	#####	MBX	W300RXX-0001	0	2	0.035537685
2015	#####	#####	MBX	W300RXX-0001	0	3	0.017758975
2015	#####	#####	0	L5DS10650	0	1	0.132409992

--  
--  
4.79 0.1385848 0.00705859 0.02892493 4.791188211  
--  
--  
2.79 0.18863121 0.00507899 0.06760178 2.790328862  
--  
--  
6.50 0.38081129 0.01445355 0.05858151 6.500537422  
--  
--  
2.00 0.36904926 0.01269793 0.18432383 2.002178747  
--  
--  
1.60 0.46541785 0.00974668 0.29032261 1.603105761  
--  
--  
30.26 0.75259574 0.0142456 0.02487211 30.25862068  
--  
--  
6.78 0.09288553 0.00166895 0.01370817 6.775922964  
--  
--  
5.39 0.09903275 0.00217067 0.01835692 5.394845377  
--  
--  
3.07 0.076211 0.00687458 0.02479413 3.073751442  
--  
--  
1.74 0.13186055 0.0037939 0.07582694 1.738966992  
--  
--  
76.44 0.04155559 0.00056752 0.00054363 76.44065839  
--  
--  
2.93 0.75788903 0.02370222 0.25873499 2.929209713  
--  
--  
8.16 0.42003367 0.06765089 0.05149857 8.156219452  
--  
--  
4.72 0.43776453 0.01494802 0.09269111 4.722832011  
--  
--  
5.81 0.14132945 0.04048633 0.02431858 5.811583877  
--  
--  
8.04 0.14275375 0.03553769 0.01775898 8.038400189  
--  
--  
5.04 0.13240999 0.01842828 0.0262869 5.037110393

ftp3bag  
ftp3bag  
ftp3bag  
ftp3bag  
ftp3bag  
ftp3bag  
ftp3bag  
ftp3bag

**Note: Data includes both light-duty and medium-duty test results.**

2015	#####	#####	0	L5DS10650	0	2	0.018428279
2015	#####	#####	0	L5DS10650	0	3	0.026286895
2015	#####	#####	0	FKB14101	0	1	0.367174858
2015	#####	#####	0	FKB14101	0	2	0.360082981
2015	#####	#####	0	FKB14101	0	3	0.116922606
2015	#####	#####	FMX	FKB14101	0	1	0.414458676
2015	#####	#####	FMX	FKB14101	0	2	0.095726433
2015	#####	#####	FMX	FKB14101	0	3	0.293184561

--  
--  
3.14 0.36717486 0.36008298 0.11692261 3.140323934  
--  
--  
1.41 0.41445868 0.09572643 0.29318456 1.413644274  
--  
--

**FTP bag results on 2009-2015 US diesel vehicles - April 26, 2016 email from Byron**

**MODEL**

**YEAR**

2009

2015

2014

2014

2012

2013

2012

2012

2009

2015

2011

2014

2015

2015

2014

2009

2009

2013

2011

2013

2009

2014

2012

2014

2013

2015

2015

2009

2009

---

2013

---

2010

2010

2010

2013

2013

2013

2014

2010

2014

2014

2014

2010

2014

2015

2015

## Bunker of EPA to John German of ICCT

TEST START	TESTKEY	MFR CODE	ALPHA	VID	Match	R	Test Car CONFIG		
							List VID	NUMBE	Bag 1 Nox
#####	#####	VW	VW351	780169/09	Y	0	0.025	0.001	0.007
#####	#####	BMW	0C06535		Y	0	0.042	0.001	0.001
#####	#####	BMW	F099010		Y	7	0.039	0.006	0.005
#####	#####	BMW	0C06511		Y	0	0.089	0.001	0.001
#####	#####	Mercedes	V251DE30TC-Z9016		Y	3	0.091	0.001	0.001
#####	#####	VW	VW 361	40129	Y	0	0.080	0.001	0.017
#####	#####	VW	411	10208 /12	Y	0	0.097	0.001	0.005
#####	#####	VW	411	10208 /12	Y	0	0.094	0.002	0.007
#####	#####	Mercedes	X164DE30-Z9000		Y	0	0.113	0.000	0.001
#####	#####	VW	VW361	50070 /15	Y	0	0.093	0.002	0.014
#####	#####	Mahindra	MA1TZ4BTL92A14029		Y	0	0.099	0.002	0.014
#####	#####	BMW	D001500		Y	2	0.119	0.002	0.001
#####	#####	VW	VW370	40145 /15	Y	1	0.076	0.007	0.025
#####	#####	VW	VW370	50379 /15	Y	2	0.099	0.002	0.018
#####	#####	BMW	F099010		Y	14	0.065	0.025	0.005
#####	#####	BMW	LJ95006		Y	0	0.119	0.009	0.008
#####	#####	Audi	EDV 93LD-TAQ		Y	0	0.124	0.007	0.015
#####	#####	BMW	A265015		Y	0	0.085	0.025	0.015
#####	#####	Mercedes	X204DE22TC-Z3016		Y	0	0.129	0.011	0.007
#####	#####	Audi	EDV B3UG-TAQ		Y	0	0.161	0.001	0.004
#####	#####	Audi	D3UG-DAQ		Y	1	0.123	0.013	0.012
#####	#####	BMW	LJ95006		Y	0	0.124	0.015	0.011
#####	#####	GM	201DPN4438		Y	0	0.128	0.011	0.016
#####	#####	Audi	B3UG-TAQ		Y	0	0.167	0.001	0.005
#####	#####	Ram	L4DS13055		Y	0	0.133	0.018	0.008
#####	#####	Audi	D3UG-DAQ		Y	1	0.148	0.013	0.010
#####	#####	Ram	L5DS10650		Y	0	0.132	0.018	0.026
#####	#####	Mercedes	W166DE22TC-Z4011		Y	0	0.132	0.004	0.076
#####	#####	BMW	A265015		Y	0	0.115	0.042	0.023
#####	#####	BMW	LJ95006		Y	0	0.194	0.016	0.043
#####	#####	VW	VW324	10220/13	Y	0	0.530	0.066	0.007
#####	#####	VW	S108RXX-0014		Later test	0	0.023	0.000	0.001
#####	#####	VW	S108RXX-0034		Later test	0	0.037	0.002	0.012
#####	#####	VW	S108RXX-0034		Later test	0	0.061	0.001	0.008
#####	#####	VW	V148RXX-0058		Later test	0	0.079	0.001	0.021
#####	#####	VW	V149RXX-0097		Later test	0	0.080	0.001	0.032
#####	#####	VW	V148RXX-0232		Later test	0	0.089	0.001	0.027
#####	#####	GM	201EPV4201			0	0.110	0.005	0.015
#####	#####	VW	S108RXX-0047		Later test	0	0.140	0.001	0.006
#####	#####	Chrysler	R4DS68933			0	0.141	0.005	0.004
#####	#####	0	2014P10670		Later test	0	0.113	0.012	0.017
#####	#####	VW	V300RXX-0007		Later test	0	0.142	0.009	0.022
#####	#####	GM	W100RXX-0036		Later test	0	0.139	0.007	0.029
#####	#####	Mercedes	L906DE30-Z0051			0	0.175	0.005	0.019
#####	#####	GM	W100RXX-0106		Later test	0	0.150	0.021	0.033
#####	#####	Mercedes	W300RXX-0001		Later test	0	0.143	0.036	0.018
#####	#####	Mercedes	W300RXX-0001		Later test	0	0.141	0.040	0.024

**Bag 1 to Bag3**

Nox Ratio	Bag 1 mg/km	Bag 2 mg/km	Bag 3 mg/km	Calc FTP Nox g/mile
3.5	15.689	0.830	4.525	0.008
76.4	25.827	0.353	0.338	0.009
8.4	24.427	3.503	2.916	0.013
64.6	55.074	0.860	0.852	0.020
67.6	56.531	0.382	0.836	0.020
4.7	49.791	0.837	10.651	0.023
17.9	60.278	0.629	3.366	0.023
13.9	58.452	1.119	4.209	0.023
195.9	70.441	0.000	0.360	0.025
6.8	57.729	1.037	8.520	0.025
7.0	61.553	1.135	8.737	0.026
112.8	73.991	1.077	0.656	0.027
3.1	47.365	4.273	15.410	0.027
5.4	61.549	1.349	11.409	0.028
12.1	40.500	15.452	3.356	0.028
14.9	73.830	5.295	4.971	0.032
8.0	77.152	4.236	9.627	0.035
5.6	52.750	15.267	9.373	0.035
17.6	80.023	6.640	4.539	0.035
39.5	100.237	0.587	2.537	0.036
10.6	76.678	8.044	7.235	0.036
11.1	76.884	9.375	6.953	0.037
7.8	79.253	6.555	10.226	0.037
34.3	103.749	0.717	3.021	0.038
16.8	82.710	10.916	4.930	0.040
15.4	92.153	7.888	5.993	0.041
5.0	82.293	11.453	16.337	0.045
1.7	81.952	2.358	47.127	0.052
5.0	71.776	25.930	14.451	0.052
4.5	120.645	9.973	26.718	0.062
76.5	329.483	40.923	4.307	0.149
16.2	14.054	0.167	0.865	0.005
3.2	23.073	1.065	7.233	0.012
7.3	37.994	0.440	5.187	0.016
3.8	49.373	0.810	12.944	0.024
2.5	49.624	0.374	19.723	0.027
3.3	55.536	0.523	17.044	0.027
7.4	68.121	3.254	9.191	0.030
22.0	86.993	0.814	3.956	0.033
36.0	87.862	2.831	2.442	0.034
6.8	70.383	7.502	10.357	0.035
6.3	88.056	5.638	13.981	0.041
4.8	86.131	4.387	17.977	0.042
9.3	108.799	2.959	11.742	0.045
4.5	93.175	13.243	20.799	0.052
8.0	88.722	22.087	11.037	0.054
5.8	87.837	25.162	15.114	0.058

**31 tests had VIDs (vehicle identification numbers)  
that matched VIDs in EPA's light-duty Test Car Lists**

---

One failed even Tier 2 bin 8 standards

---





---

---

2014

2013

2014

---

2015

2014

2014

2015

2013

2013

2015

2015

2014

2009

2010

2013

2014

2013

2015

2010

2013

2014

2014

2015

2014

2013

2015

2014

2013

2010

2015

2014

2014

2014

2014

2010

2015

2014

2015

2010

2011

2011

#####	#####	GM	W100RXX-0109	Later test	0	0.189	0.005	0.068
#####	#####	GM	66C2C96075	Later test	0	0.354	0.008	0.043
#####	#####	Chrysler	V152RXX-0176	Later test	0	0.181	0.034	0.134
#####	#####	FMX	FFA1-6.7-J-600		0	0.381	0.014	0.059
#####	#####	Mercedes	L906DE22TC-Z4013-1		0	0.254	0.053	0.116
#####	#####	Chrysler	V152RXX-0098	Later test	0	0.246	0.043	0.163
#####	#####	0	L4VF18455		1	0.438	0.015	0.093
#####	#####	0	V148RXX-0090	Later test	0	0.567	0.015	0.008
#####	#####	CEX	K3DJ79113		0	0.565	0.016	0.020
#####	#####	FMX	ETH1-3.2-464		0	0.369	0.013	0.184
#####	#####	0	L906DE30TC-Z5051-1		0	0.420	0.068	0.051
#####	#####	CEX	K3DJ79113		1	0.540	0.028	0.048
#####	#####	CEX	L6D184311		2	0.389	0.037	0.158
#####	#####	Mercedes	L906DE30-Z0051		0	0.417	0.098	0.043
#####	#####	FMX	DFA1-6.7-J-316		0	0.352	0.038	0.250
#####	#####	Chrysler	V152RXX-0091	Later test	0	0.270	0.101	0.214
#####	#####	CEX	V3DJ75193	Later test	1	0.603	0.038	0.088
#####	#####	CEX	6292		0	0.753	0.014	0.025
#####	#####	CEX	K0D288343		4	0.369	0.047	0.262
#####	#####	CEX	V3D281768	Later test	1	0.609	0.053	0.074
#####	#####	0	V4DJ75663	Later test	0	0.628	0.009	0.149
#####	#####	0	312T672	Later test	1	0.352	0.055	0.281
#####	#####	CEX	V3DJ75193	Later test	3	0.662	0.046	0.066
#####	#####	FMX	EKA00026		0	0.465	0.010	0.290
#####	#####	0	312T672	Later test	1	0.378	0.080	0.266
#####	#####	VW	V148RXX-0232	Later test	0	0.840	0.021	0.059
#####	#####	CEX	K0D288343		0	0.421	0.068	0.308
#####	#####	FMX	FKB14101	Later test	0	0.414	0.096	0.293
#####	#####	Chrysler	V152RXX-0147	Later test	0	0.341	0.141	0.279
#####	#####	Chrysler	V152RXX-0335	Later test	0	0.167	0.348	0.082
#####	#####	0	V4D234858	Later test	0	0.700	0.107	0.109
#####	#####	0	V4DJ28661	Later test	0	0.622	0.139	0.131
#####	#####	CEX	K0D288343		0	0.492	0.105	0.299
#####	#####	0	JF7400002		0	0.758	0.024	0.259
#####	#####	0	V4D234858	Later test	1	0.559	0.160	0.216
#####	#####	0	FKB14101	Later test	0	0.367	0.360	0.117
#####	#####	CEX	K0D288343		2	0.562	0.132	0.407
#####	#####	SZX	JB7400010		0	0.987	0.056	0.313
#####	#####	FMX	BFA1-6.7-J-005		0	0.861	0.125	0.384
ALL						0.283	0.038	0.083

Minimum

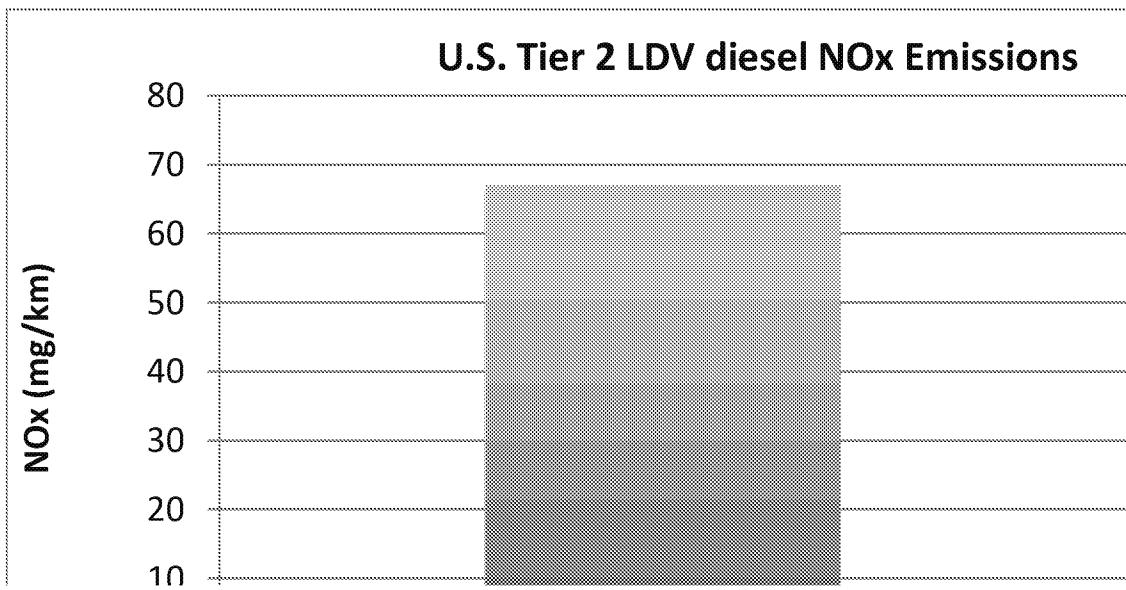
Confirmed LDV tests Min.	0.108	0.008	0.013
-----------------------------	-------	-------	-------

2.8	117.235	3.157	42.015	0.062
8.3	219.833	4.706	26.415	0.092
1.4	112.293	21.353	82.975	0.094
6.5	236.676	8.983	36.409	0.106
2.2	157.827	32.914	71.916	0.114
1.5	152.729	26.730	101.024	0.121
4.7	272.072	9.290	57.608	0.128
70.8	352.684	9.505	4.984	0.132
27.9	351.130	10.057	12.602	0.135
2.0	229.366	7.892	114.558	0.138
8.2	261.053	42.045	32.007	0.139
11.3	335.474	17.410	29.638	0.144
2.5	241.837	22.955	98.415	0.147
9.7	259.362	60.857	26.791	0.151
1.4	218.907	23.661	155.275	0.166
1.3	168.023	62.953	132.963	0.170
6.9	374.882	23.458	54.707	0.174
30.3	467.741	8.854	15.458	0.176
1.4	229.561	29.180	162.965	0.178
8.3	378.291	32.864	45.798	0.178
4.2	390.067	5.768	92.506	0.182
1.3	218.832	34.081	174.494	0.183
10.1	411.331	28.308	40.759	0.184
1.6	289.259	6.058	180.437	0.188
1.4	234.950	49.574	165.402	0.197
14.2	522.118	13.066	36.659	0.208
1.4	261.953	42.108	191.365	0.212
1.4	257.588	59.494	182.215	0.221
1.2	211.695	87.610	173.523	0.223
2.0	103.973	216.491	50.746	0.233
6.4	435.158	66.409	67.741	0.235
4.8	386.284	86.642	81.295	0.241
1.6	305.489	65.338	185.583	0.243
2.9	471.031	14.731	160.805	0.249
2.6	347.216	99.404	134.172	0.262
3.1	228.201	223.793	72.668	0.292
1.4	349.265	81.979	253.229	0.303
3.2	613.557	34.534	194.397	0.329
2.2	535.067	77.505	238.545	0.357
3.4	176.122	23.744	51.339	29.1%
1.2				82.0%

	Cold start (bag 1)		Hot start (bag 3)	
8.0	67.043	5.269	8.339	12.4%
1.7				57.5%

<u>Nox Emission Standards</u>	<u>50 k (g/mi)</u>	<u>120k (g/mi)</u>
Tier 2 bin 5	0.05	0.07
Tier 2 bin 6	0.08	0.10
Tier 2 bin 7	0.11	0.15
Tier 2 bin 8	0.14	0.20
Weighted FTP Nox	# vehicles	Bag 1 g/km
< 0.09 (60% of bin 7)	47	#REF!
< 0.10 (50% of bin 8)	49	#REF!
< 0.12 (60% of bin 8)	51	#REF!

Cold start (bag 1) Hot start (bag 3)

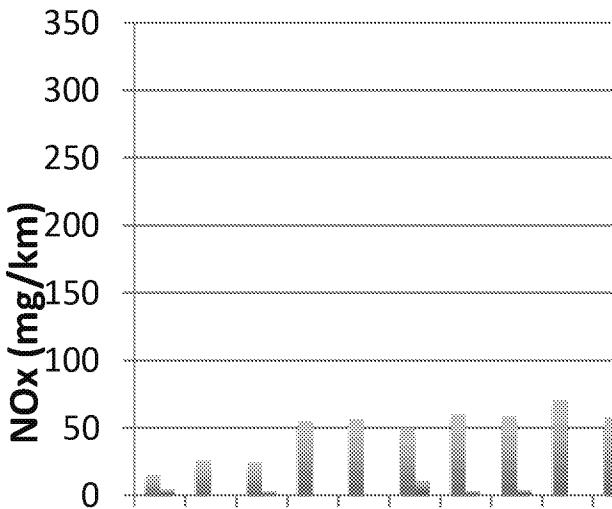


---

**50% of 120k (g/mi)**    **60% of 120k (g/mi)**

0.035	0.042
0.050	0.060
0.075	0.090
0.100	0.120

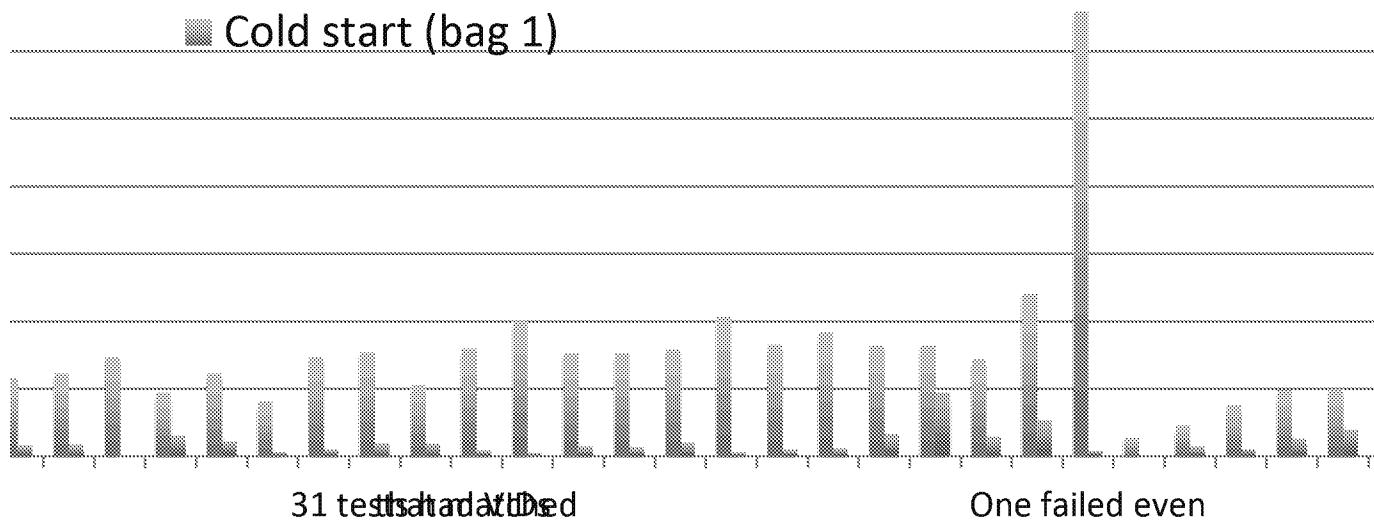
Bag 3 g/km    Avg. ratio bag 3/ bag 1 Max ratio bag 3/ bag 1  
#REF!                #REF!                #REF!  
#REF!                #REF!                #REF!  
#REF!                #REF!                #REF!

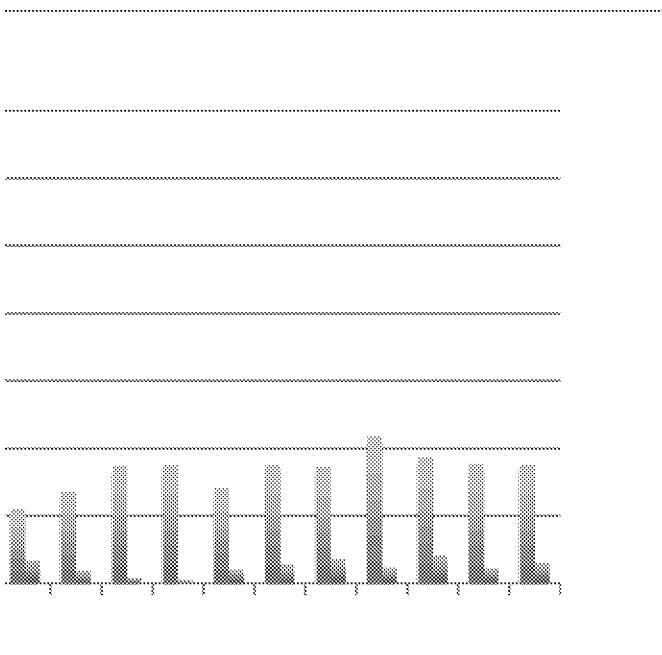


---

## FTP NOx Emissions - cold versus hot start

---



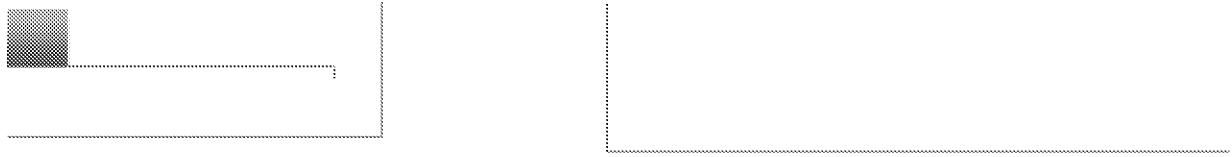






ED\_006561\_00000508-00035





ED\_006561\_00000508-00037

(we Disclose EPA's  
idequalification Test  
numbers) lists

---

Tier 2 bin 8  
standards

